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09/993,479	11/27/2001	Dei-Chin Lee	LEED3004/EM	7161

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EXAMINER
SANTOS, PATRICK J D

ART UNIT	PAPER NUMBER
2161	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/993,479	LEE ET AL.
	Examiner	Art Unit	
	Patrick J Santos	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 May 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-7</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-7</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Objections to the Specification and Claims

1.   Examiner notes amended specification and claims, and withdraws objections.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over of

U.S. Patent Application Publication US2003/0009361 A1 by Hancock et al. (hereafter Hancock

'361), in view of U.S. Patent No. 5,712,985 issued to Lee et al. (hereafter Lee '985), in further

view of the publication "Best Practice in Inventory Management" by Wild, published by John

Wiley & Sons, 1997 (hereafter Wild '97).

<u>Claim 1:</u>

Regarding Claim 1, Hancock '361 teaches an inventory system that provides data; using

the data in the inventory system to evaluate vendors; and teaches calculating ratios as part of

evaluating vendors. Specifically, Hancock '361 teaches the inventory management system

(Hancock '361: Abstract) established between computers of a product manufacturer and at least

one component part supplier over a network connection (Hancock '361: paras. [0011] and

[0012], Fig. 1); for correctly evaluating the capability of supplying a component part by each component part supplier (Hancock '361: para. [0218]), the system including the steps of:

- producing a document based on types and quantities of the component parts, transmitting the document to the computers of each component part supplier through the network connection, and requesting each component part supplier to return a promised quantity of the component parts on the forthcoming period of time to the product manufacturer (Hancock '361: paras. [0066] and [0013]);

- receiving the promised quantity of the component parts of each component part supplier during the forthcoming period of time by the product manufacturer and writing the same in the database (Hancock '361: paras. [0067] and [0013]);

- writing an actual delivery of the promised quantity of the component parts of each component part supplier during the forthcoming period of time in the database (Hancock '361: paras. [0069] and [0013]); and

- reading data from the database for calculating ratios of each component part supplier during the forthcoming period of time with respect to the component parts (Hancock '361: para. [0218]).

- producing an evaluation table of each component part supplier as a reference by the product manufacturer (Hancock '361: Figs. 9A and 9B). (Note that Hancock '361 teaches a wide range of possible reports and evaluation tables based on historical data; see paras. [0212] through [0220].)

Hancock '361 does not explicitly teach:

- estimating a demand for component parts during a forthcoming period of time in accordance with orders inputted and writing the same in a database of the system;

- calculating a promise execution ratio and a delivery execution ratio wherein:

    ○ the promise execution ratio = the promised quantity of the component parts / the estimated demand for the component parts, and

    ○ the delivery execution ratio = the actual delivery of the promised quantity of the component parts / the promised quantity of the component parts,

producing a daily evaluation table.

Lee '985 teaches a demand forecasting system and a forecast reporting system. Specifically Lee '385 teaches:

- estimating a demand for component parts during a forthcoming period of time in accordance with orders inputted and writing the same in a database of the system (Lee '385: col. 2, ln. 63 to col. 3, ln. 7; col. 3, lns. 8-15; col. 3, lns. 54-64; col. 6, lns. 18-34); and

- producing a daily evaluation table (Lee '385: col. 1, lns. 37-55). (Lee '385 actually teaches a generalization in which the system of Lee '385 is capable of generating regular reports for an arbitrary time period to a minimal granularity of 15 minutes.)

Lee '985 does not explicitly teach:

- calculating a promise execution ratio and a delivery execution ratio wherein:

    ○ the promise execution ratio = the promised quantity for the component parts / the estimated demand of the component parts, and

      o   the delivery execution ratio = the actual delivery of the promised quantity of the component parts /

           the promised quantity of the component parts.

Wild '97 teaches best practices of inventory management systems. The teachings of

Wild '97 include the use of moving averages (Wild '97: pp. 149-150, Section titled, "Moving

Average") which reads on:

-   calculating a promise execution ratio and a delivery execution ratio wherein:

      o   the promise execution ratio = the promised quantity for the component parts / the estimated

           demand of the component parts, and

      o   the delivery execution ratio = the actual delivery of the promised quantity of the component parts /

           the promised quantity of the component parts.

It would have been further obvious to a person having ordinary skill in the art to apply

the forecasting system of Lee '985 to the inventory system of Hancock '361 as per the teachings

of Wild '97. Note that Hancock '361 specifically teaches the incorporation of logic to measure

supplier performance criteria (Hancock '361: para [0218]). Further note that Lee '985 which

teaches that application of the invention of Lee '985 provides the advantage of a more accurate

means to estimate demand of component parts (Lee '985: col. 1, lns. 37-55; col. 2, lns. 40-60).

The motivation to combine is suggested by Wild '97 which teaches the requirement of accurate

demand forecasting since the cost of inventory is borne by the customer, specifically stating,

"Good forecasting means low stock. Poor forecasting means high stock. Forecasting should be

based on data which is accurate and appropriate for the purpose." (Wild '97: p.135, Section

titled, "Options for Assessing Demand"). Thus substituting the generic vendor evaluation logic

of Hancock '361 with the more accurate forecasting system of Lee '985 provides a system with

the advantages of low inventory as taught by Wild '97.

Note that the calculation of a promise execution ration and a delivery execution ratio is

enabled by the Hancock '361, Lee '985, and Wild '97 combination. The calculation elements of

a promised delivery quantity, and an actual delivery quantity are available from the data of

Hancock '361 in the Hancock '361, Lee '985, and Wild '97 combination. Furthermore, the

calculation element of the estimated demand of component parts is available from the data of

Lee '985 in the Hancock '361, Lee '985, and Wild '97 combination. Finally, Hancock '361

teaches the use of calculating ratios (Hancock '361: para [0218]) and Wild '97 teaches the use

of moving averages to calculate ratios as part of best practices of operations management (Wild

'97: pp. 149-150, Section titled, "Moving Average"). In light of the ready availability of the

calculation elements and the general practice of using ratios as a metric for determining

performance, applicant's specific limitations of a promise execution ratio and a delivery

execution ratio is unpatentable.

Claim 2:

Regarding Claim 2, Hancock '361, Lee '985, and Wild '97 in combination teach all the

limitations of Claim 1 (supra). Further note that Wild '97 of the Hancock '361, Lee '985, and

Wild '97 combination teaches a calculation which makes use of an accumulation over a time

period which reads on "wherein the estimated demand for the component parts is an

accumulation of the estimated demand for the component parts received by each component part

supplier from the product manufacturer during the forthcoming period of time" (Wild '97: pp.

151-152, Section titled, "Alternative Calculation Methods for a Moving Average").

Claim 3:

Regarding Claim 3, Hancock '361, Lee '985, and Wild '97 in combination teach all the

limitations of Claim 1 (supra). Further note that Wild '97 of the Hancock '361, Lee '985, and

Wild '97 combination teaches, teaches a calculation which makes use of an accumulation over a

time period which reads on "wherein the promised quantity of the component parts is an

accumulation of the promised quantity of the component parts by each component part supplier

with respect to the estimated demand for the component parts during the forthcoming period of

time" (Wild '97: pp. 151-152, Section titled, "Alternative Calculation Methods for a Moving

Average").

Claim 5:

Regarding Claim 5, Hancock '361, Lee '985, and Wild '97 in combination teach all the

limitations of Claim 1 (supra). Further note that Wild '97 of the Hancock '361, Lee '985, and

Wild '97 combination teaches a calculation which makes use of an accumulation over a time

period which reads on "wherein the daily evaluation table of each component part supplier is

accumulated as a regular evaluation table comprising the promise execution ratio and the

delivery execution ratio of each component part supplier during the forthcoming period of time"

(Wild '97: pp. 151-152, Section titled, "Alternative Calculation Methods for a Moving

Average").

Claim 6:

Regarding Claim 6, Hancock '361, Lee '985, and Wild '97 in combination teach all the

limitations of Claim 1 (supra). Further note that Hancock '361 of the Hancock '361, Lee '985,

Aycock '138, and Wild '97 combination teaches providing a report that shows calculation

elements which reads on "wherein the regular evaluation table comprises: the estimated demand

for the component parts during the forthcoming period of time transmitted by the product

manufacturer to each component part supplier; the quantity of the component parts promised by

each component part supplier during the forthcoming period of time in response to the estimated

demand for the component parts; and the actual delivery of the promised quantity of the

component parts by each component part supplier on the forthcoming period of time" (Hancock

'361: Fig. 9B, paras. [0167] and [0169]). Note that the screens displayed by Hancock '361 of

the Hancock '361, Lee '985, Aycock '138, and Wild '97 combination are merely exemplary, and

are modified accordingly i.e. will show the appropriate calculation elements, to accommodate the

variations as enumerated by Hancock '361 of the Hancock '361, Lee '985, Aycock '138, and

Wild '97 combination (Hancock '361: paras. [0212] through [0220]).

Claim 7:

Regarding Claim 7, Hancock '361, Lee '985, Aycock '138, and Wild '97 in combination

teach all the limitations of Claim 1 (supra). Further note that the Hancock '361, Lee '985,

Aycock '138, and Wild '97 combination teaches, "wherein the regular evaluation table further

comprises the promise execution ratio and the delivery execution ratio of each component part

supplier, wherein:

- the promise execution ratio = the number of items promised in response to the estimated demand for the

   component parts / the number of the component part items estimated on the forthcoming period of time;

   and

- the delivery execution ratio = the number of the component part items actually delivered in response to the

   promised demand of the component parts / the number of items promised in response to the estimated

   demand for the component parts"

(Hancock '361: Fig. 9B, paras. [0167] and [0169]).

Hancock '361 of the Hancock '361, Lee '985, Aycock '138, and Wild '97 combination

teaches providing a report that shows calculation elements which reads on the above limitation.

The screens displayed by Hancock '361 of the Hancock '361, Lee '985, Aycock '138, and Wild

'97 combination are merely exemplary, and are modified accordingly i.e. will show the

appropriate calculation elements i.e. the promise execution ratio and the delivery execution ratio,

to accommodate the variations as enumerated by Hancock '361 of the Hancock '361, Lee '985,

Aycock '138, and Wild '97 combination (Hancock '361: paras. [0212] through [0220]).

4.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hancock '361, Lee

'985, and Wild '97 in view of U.S. Patent No. 5,765,138 issued to Aycock et al. (hereafter

Aycock '138) .

Claim 4:

Regarding Claim 4, Hancock '361, Lee '985, and Wild '97 in combination teach all the

limitations of Claim 1 (supra). However, Hancock '361, Lee '985, and Wild '97 in combination

do not explicitly teach "wherein the promise execution ratio and the delivery execution ratio

having a percentage smaller than 100% are deemed as a fail and are represented by 0, the

promise execution ratio and the delivery execution ratio having a percentage larger than 100%

are deemed as a success and are represented by 100, and the value of 0 or 100 is then written in a

field of the promise execution ratio or the delivery execution ratio of the daily evaluation table

by the system."

Aycock '138 teaches a system for evaluating past vendors with known criteria and

rejecting vendors that do not meet said criteria. Specifically, Aycock '138 reads on, "wherein

the promise execution ratio and the delivery execution ratio having a percentage smaller than

100% are deemed as a fail and are represented by 0, the promise execution ratio and the delivery

execution ratio having a percentage larger than 100% are deemed as a success and are

represented by 100, and the value of 0 or 100 is then written in a field of the promise execution

ratio or the delivery execution ratio of the daily evaluation table by the system" (Aycock '138:

col. 7, lns. 38-45). Further note that Aycock '138 teaches the means to interface with external

databases such as that of the Hancock '361, Lee '985, and Wild '97 combination (Aycock ;138:

col. 3, ln. 62 to col. 4, ln. 6).

It would have been obvious to a person having ordinary skill in the art to apply the

vendor evaluation system of Aycock '138 to the Hancock '361, Lee '985, and Wild '97

combination. Note that Hancock '361 specifically teaches the incorporation of logic to measure

supplier performance criteria (Hancock '361: para. [0218]). The motivation to combine is

suggested by Wild '97 which teaches the requirement for appraising existing supply vendor

performance since poor vendor performance costs are often borne by the customer (Wild '97: p.

119, Section titled, "Vendor Appraisal"). Furthermore, Wild '97 teaches an advantage of vendor

performance appraisal as providing the means of eliminating vendors with poor performance,

specifically stating, "The ability of a business to meet commitments to its customer depends on

the quality of support it receives from its suppliers. If that support is missing, then the business

must look elsewhere for better service" (Wild '97: pp. 119-120, Section titled, "Vendor

Appraisal"). Thus augmenting the vendor evaluation logic of the Hancock '361, Lee '985, and

Wild '97 combination with the improved vendor evaluation logic of Aycock '138 provides a

system with the advantages of vendor appraisal as taught by Wild '97.

Response to Arguments

5.   Applicant's arguments filed May 28, 2004 have been fully considered but they are not

persuasive. Applicant's arguments are addressed as follows:

A.   Applicant argues that while the calculation elements are available in prior art, the

        prior art does not explicitly disclose calculation of the ratios making available to

        the manufacturer (Amendment: p. 7, lns. 13-16).

        On the contrary, Wild' 97 discloses calculation of the ratios (Wild '97: pp. 149-

        150, Section titled, "Moving Average"). Furthermore, a person having ordinary

        skill in the art, faced with the problem of implementing an inventory management

        system, would be motivated not only to calculate the ratios, but also to make

        available to any users of the inventory management system, including the

        manufacturer.

B.   Applicant argues that Hancock '361 does not disclose a category for "total

        estimated demand for parts" (Amendment: p. 7, lns. 21-23).

        On the contrary, Hancock '361, discloses interactive reports and customized

        reports "tailored to the needs of individual customers" (Hancock '361: paras.

[0213] and [0214]). A person having ordinary skill in the art, faced with the
problem of implementing an inventory management system that specified a "total
estimated demand for parts", would be motivated to create a report with Hancock
'361 that includes a "total estimated demand for parts."

C. Applicant argues that Hancock '361 does not provide any means to provide ratios
(Amendment: p. 8, lns. 7-8).

On the contrary, as stated above, Hancock '361, discloses interactive reports and
customized reports "tailored to the needs of individual customers" (Hancock
'361: paras. [0213] and [0214]). A person having ordinary skill in the art, faced
with the problem of implementing an inventory management system that specified
a particular performance parameters (Amendment: p. 7, ln. 4), would be
motivated to create a report with Hancock '361 that included those particular
performance parameter.

D. Applicant argues that Lee '985 tracks supply side of a transaction rather than the
demand side thus does not contain the variables necessary to calculate the ratios
(Amendment: p. 8, lns. 17-20; p. 9, lns. 5-7).

Examiner responds that Hancock '361, Lee '985, and Wild '97 in combination
provides the variables necessary to calculate the ratios. As set forth in the Office
Action:

Hancock '361 discloses:

- receiving the promised quantity of the component parts of each component

    part supplier during the forthcoming period of time by the product

    manufacturer and writing the same in the database (Hancock '361: paras.

    [0067] and [0013])

- writing an actual delivery of the promised quantity of the component parts

    of each component part supplier during the forthcoming period of time in

    the database (Hancock '361: paras. [0069] and [0013]

and Lee '985 discloses:

- estimating a demand for component parts during a forthcoming period of

    time in accordance with orders inputted and writing the same in a database

    of the system (Lee '385: col. 2, ln. 63 to col. 3, ln. 7; col. 3, lns. 8-15; col.

    3, lns. 54-64; col. 6, lns. 18-34)

and furthermore, Hancock '361 discloses:

- interactive reports and customized reports "tailored to the needs of

    individual customers" (Hancock '361: paras. [0213] and [0214]) (see

    Argument B (supra))

Lee '985 in fact is a demand forecasting system (Lee '985: Abstract), albeit for

the supplier. However, the statistical methods that apply to estimating demand for

the market at large also equally apply to the statistical methods to estimate

demand for a single customer. Therefore:

- the data in the Hancock '361 system plus the facility of custom reports of

    Hancock '361; and

- the data in the Lee '985 system plus the statistical methods in the Lee '985

    system; and in combination with

- the statistical methods of Wild '97;

provide all the variables of the ratio, the ratio itself, and the means to transmit the

ratio to the manufacturer. Thus taken in combination, the references provide all

the variables of the ratio, the ratio itself, and the means to transmit the ratio to the

manufacturer – despite the fact that Lee '985 discloses a system described in

terms of the supplier.

Finally, generally, one cannot show nonobviousness by attacking references

individually where the rejections are based on combinations of references. See *In*

re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800

F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

E.   Applicant argues that Wild '97 moving average is directed to forecasting sales

    rather than calculating parts suppliers performance (Amendment: p. 8, lns. 23-

    25).

On the contrary, the moving average of Wild '97 is very well known in the art

(and in fact long predates Wild '97), and is a generic statistical method that may

be directed not only to forecasting sales, but to any set of data with a statistically

significant sample size, including parts suppliers performance. In the case of the

present application, the person having ordinary skill in the art is a database

application developer familiar with inventory systems, including the concept of

moving averages. Although Wild '97 discusses the moving average in the context

of forecasting sales, this application does not preclude use of a moving average in

other contexts.

F.   Applicant argues that Aycock '138 discloses pre-order audits rather than

      performance trancking (Amendment: p. 8, lns. 17-20).

      On the contrary, the combination of Hancock '361, Lee '985, Wild '97, and

      Aycock '138 taken as a whole discloses performance tracking. Examiner refers

      back to Argument D (supra).

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Patrick J.D. Santos whose telephone number is 571-272-4028.

The examiner can normally be reached on M-F 8:00-4:30.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

        Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick J.D. Santos
November 17, 2004

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